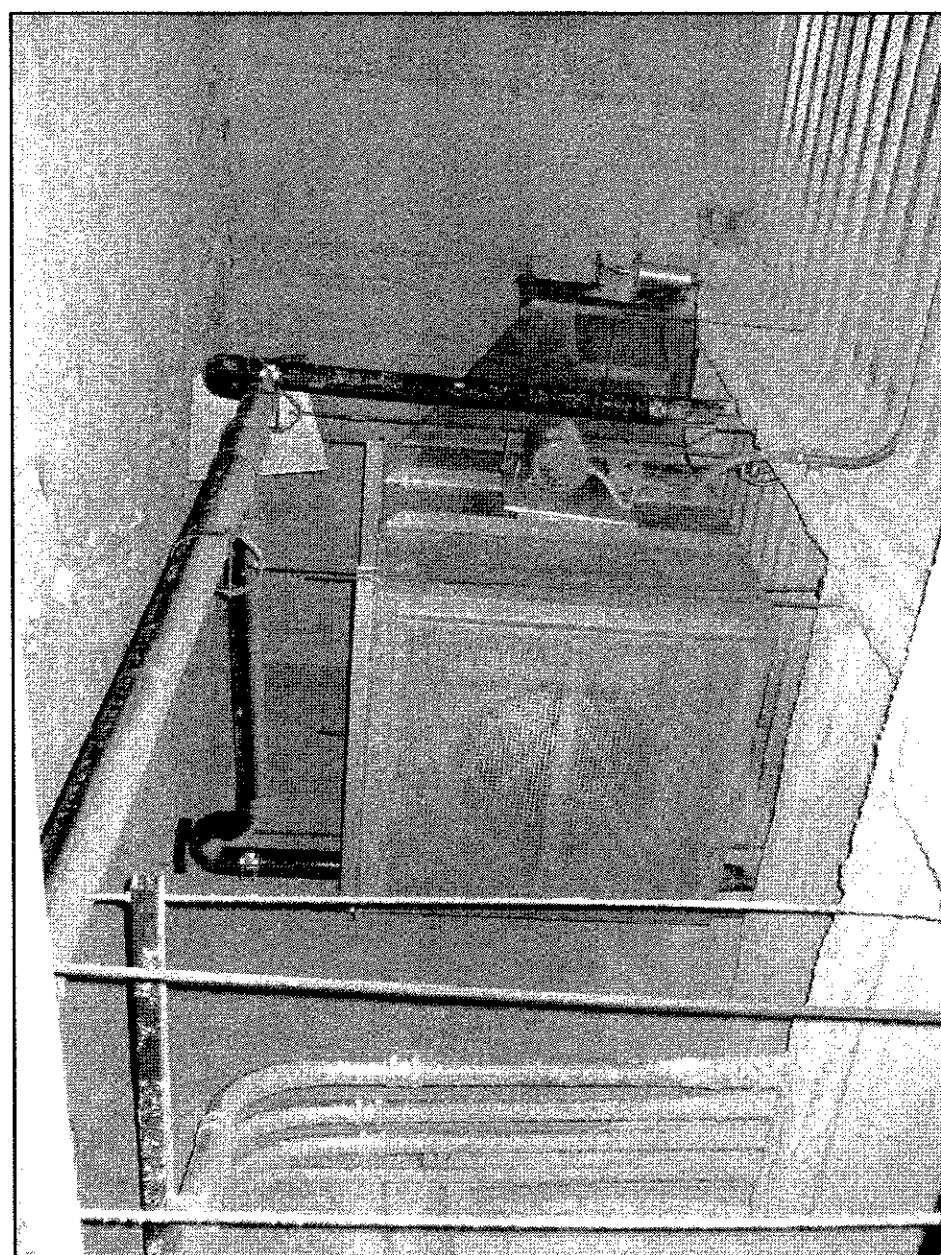
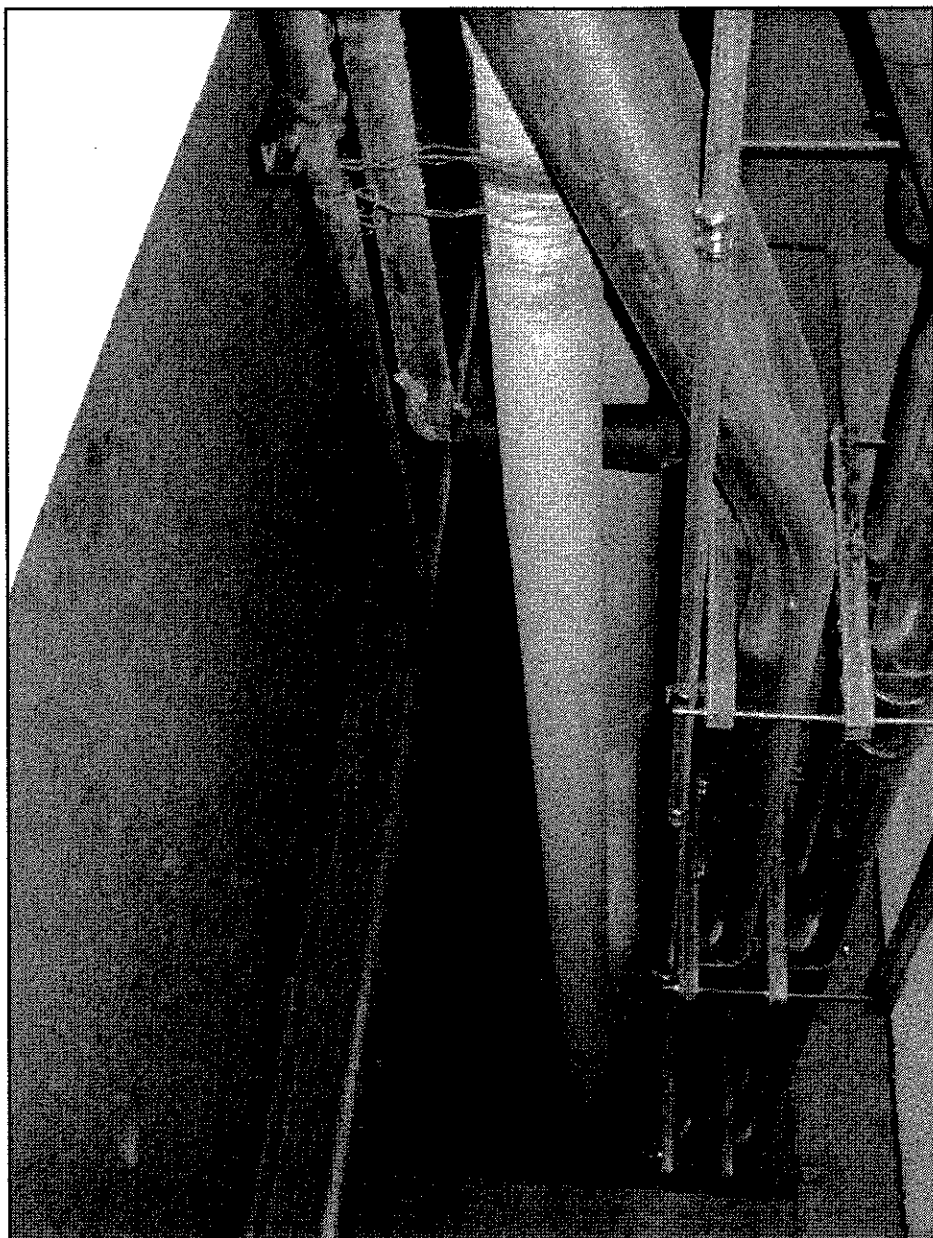


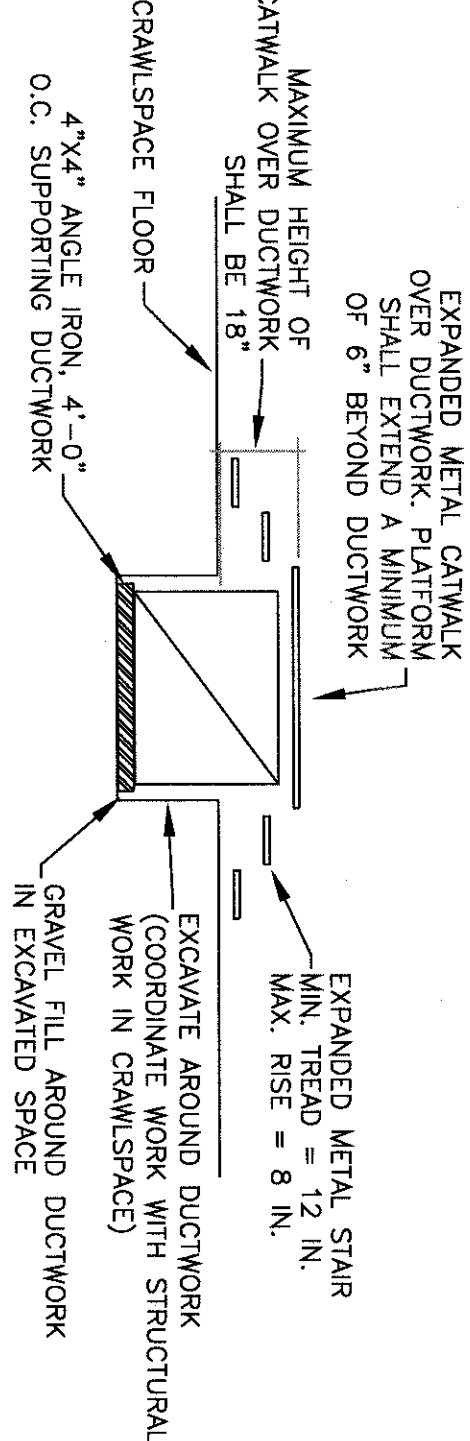
AHU ELEVATION
GRAPHIC SCALE SUPERSEDES NUMERIC SCALE
0 4 8 16
SCALE: 1/8" = 1'-0"



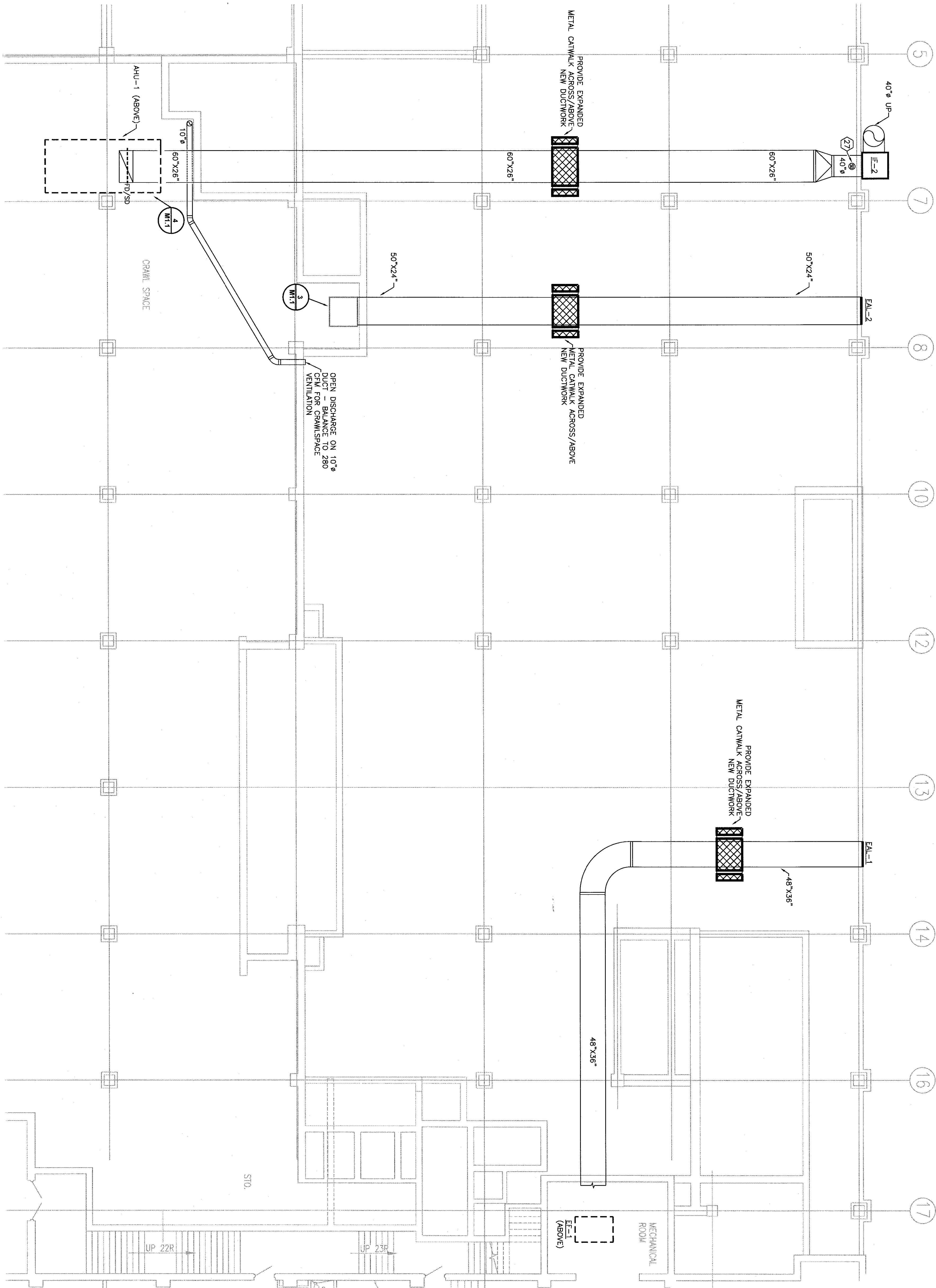
EXISTING VENTILATION FAN
GRAPHIC SCALE SUPERSEDES NUMERIC SCALE
NOT TO SCALE



UTILITIES TO BE RELOCATED
GRAPHIC SCALE SUPERSEDES NUMERIC SCALE
NOT TO SCALE



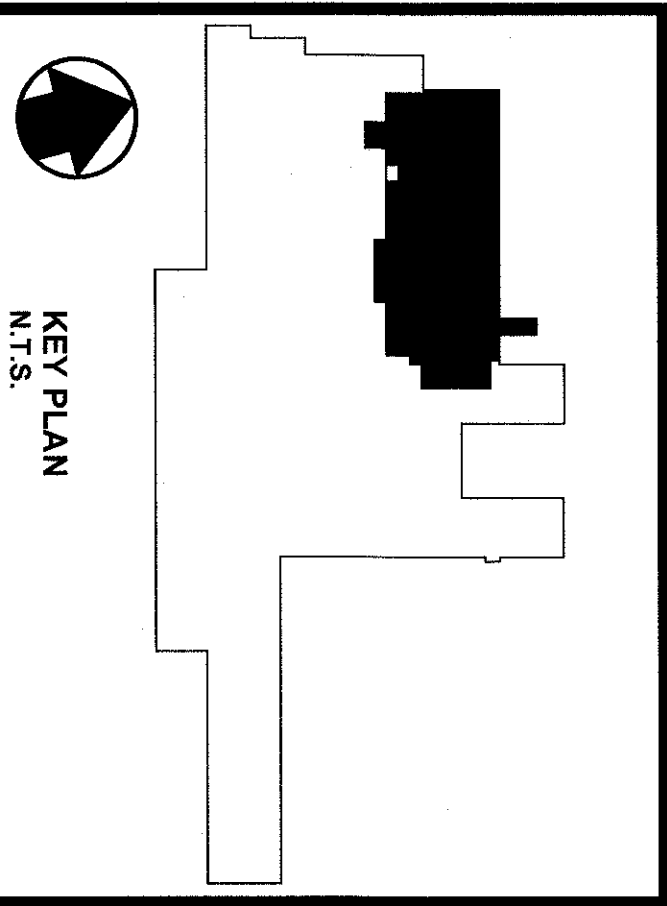
CATWALK OVER DUCTWORK DETAIL
GRAPHIC SCALE SUPERSEDES NUMERIC SCALE
0 4 8 16
SCALE: 1/8" = 1'-0"



NEW HVAC WORK - CRAWLSPACE
GRAPHIC SCALE SUPERSEDES NUMERIC SCALE
0 4 8 16
SCALE: 1/8" = 1'-0"

GENERAL NOTES (COMMON TO ALL "M" SHEETS)

1. SOME WORK UNDER THIS CONTRACT WILL REQUIRE WORK DUTIES TO BE PERFORMED AFTER NORMAL WORKING HOURS. DETERMINATION OF SPECIFIC WORK DUTIES TO BE PERFORMED AFTER HOURS SHALL BE MADE BY VA STAFF AT THEIR CONVENIENCE. POSSIBLE WORK REQUIRING AFTER HOURS APPROVAL INCLUDES, BUT IS NOT LIMITED TO: POWER OUTAGES AND DISRUPTION OF SERVICE.
2. EXTREME NOISE AND/OR VIBRATION, CUTTING AND PATCHING OF CONCRETE, TRENCHING, AND DELIVERY OF EQUIPMENT.
3. ALL NEW SUPPLY AIR GRILLES, REGISTERS, DIFFUSERS, ETC. AND ALL RETURN AIR GRILLES, REGISTERS, ETC. SHALL HAVE MATCHING FINISHES. FINISH TO BE SELECTED AND APPROVED BY VA PERSONNEL.
4. PERSONNEL IN DUCTWORK SHALL BE SMOOTH LONG RADIIUS ELBOWS. ALL ELBOWS SHALL BE PROVIDED WITH TURNING VANES.
5. MANUAL DAMPERS SHALL BE PROVIDED IN SUPPLY, EXHAUST AND RETURN AIR DUCTWORK (TYPICAL). DAMPERS SHALL BE LOCATED AS FAR AWAY FROM AIR TERMINAL DEVICE (REGISTER, DIFFUSER, ETC.) AS POSSIBLE, BUT MUST BE LOCATED IN THE SAME ROOM AS THAT DEVICE. FOR PURPOSES OF CLARITY, NOT ALL DAMPERS ARE SHOWN ON DRAWINGS.
6. FIRE DAMPERS SHALL BE PROVIDED AT ALL DUCT PENETRATIONS OF 2-HOUR RATED FIRE BARRIERS/WALLS/PARTITIONS. SEE FIRE DAMPER LOCATIONS ON THIS SHEET AND LIFE SAFETY SHEET FOR ADDITIONAL DETAILS.
7. ALL NEW DEVICES, EQUIPMENT, CONTROLS, ETC. (INCLUDING BUT NOT LIMITED TO: CAV'S, VAV'S, AHU, GRILLES, REGISTERS, AND DIFFUSERS, FANS, HOT WATER PIPING, ETC.) SHALL BE TESTED AND BALANCED AS PART OF THIS WORK.
8. ALL FANS SUBMITTED, PURCHASED, INSTALLED, ETC. SHALL BE CAPABLE OF 110% OF UNOBTAINED CFM AND PRESSURE CAPACITIES LISTED ON DRAWINGS AND IN SCHEDULES PER VA REQUIREMENTS.
9. THAT MAKE NECESSARY ALTERNATE ROUTING OF DUCTWORK.
10. HYDROBIC PIPING RUNS TO EQUIPMENT ARE REPRESENTATIVE ONLY. CONTRACTOR SHALL BE RESPONSIBLE FOR ANY CONDITIONS IN THE FIELD (EXISTING, OR PREDICTED BY LOCATION OF NEW EQUIPMENT).
11. APPROVED PRODUCTS AND PROCEDURES.
12. ALL HYDROBIC AND CONDENSATE DRAIN PIPING SHALL BE OF SWEATED COPPER CONSTRUCTION. FITTINGS SHALL BE PROVIDED PER SPECIFICATIONS AND AS INDICATED IN MECHANICAL DETAILS.
13. DUCTWORK SHALL BE ROUTED HIGH AND TIGHT IN JOIST SPACES ABOVE CEILING WHEREVER POSSIBLE IN ORDER TO AVOID CONFLICT WITH OTHER UTILITIES, LIGHTS, DUCTWORK, ETC.
14. ALL EXTERIOR DUCTWORK SHALL BE OF DOUBLE-WALL INSULATED CONSTRUCTION. CONSTRUCTION SHALL BE PER SPECIFICATIONS AND PER SMACNA STANDARDS.
15. ALL CONNECTIONS BETWEEN MEDIUM PRESSURE MAINS AND VAV/CAV AIR TERMINALS SHALL BE MADE WITH HARD METAL CONNECTIONS - FLEXIBLE CONNECTORS ARE NOT ACCEPTABLE.
16. FOR CAV/VAV AIR TERMINALS LOCATED IN AREAS WHERE ACCESS AND/OR SERVICE WILL BE DIFFICULT, MECHANICAL CONTRACTOR SHALL PERMANENTLY REMOVE COVERS. THIS DETERMINATION SHALL BE COORDINATED WITH VA MAINTENANCE PERSONNEL.
17. ALL ACCESS PANELS FOR FAN BEARINGS/MOTORS SHALL BE LARGE ENOUGH FOR COMPLETE ACCESS BY VA MAINTENANCE PERSONNEL, AS WELL AS LARGE ENOUGH FOR REMOVAL/REPLACEMENT OF BEARINGS. AND SMOKE DAMPERS SHALL BE EQUIPPED WITH EPO-SWITCHES INDICATING DAMPER POSITION AND OPERATION. END SWITCHES SHALL BE TIED-IN TO EXISTING CONTROLS SYSTEM FOR MONITORING.
22. HOT WATER HEATING LINES SHALL BE PROVIDED WITH METAL FLEXIBLE JOINTS - RUBBER OR ELASTOMERIC MATERIALS ARE NOT ACCEPTABLE.
23. ALL RAIL VALVES SHALL BE 100% DRAINABLE.
24. ALL NEW CONTROLS SHALL BE TIED-IN TO EXISTING ECU. ALL CONTROLLERS SHALL BE OPERABLE AND VIEWABLE FROM THE EXISTING CONTROL CENTER. ANY DEVIATION SHALL REQUIRE JUSTIFICATION FROM CONTRACTOR, AND APPROVAL SHALL BE GRANTED AT THE VA'S DISCRETION.
25. ALL NEW CONTROLS SHALL BE TIED-IN TO EXISTING ECU. ALL CONTROLLERS SHALL BE OPERABLE AND VIEWABLE FROM THE EXISTING CONTROL CENTER. ANY DEVIATION SHALL REQUIRE JUSTIFICATION FROM CONTRACTOR, AND APPROVAL SHALL BE GRANTED AT THE VA'S DISCRETION.
26. TEMPORARY PUMPS FOR SYSTEM FLUSH, AS WELL AS ANY TAPS REQUIRED FOR THIS WORK, HYDROBIC SYSTEM SHALL BE PROVIDED WITH FILTRATION SYSTEM ON BOTH SUPPLY AND RETURN LINES.
27. TEMPERATURE RISE ACROSS COIL SHALL BE 50% OF DESIGN VALUE - WHEN VALUE IS AT 50% FLOW, 50% CAV AND VAV AIR TERMINAL. HOT WATER CONTROL VALVES SHALL BE NORMALLY CLOSED. THE ELECTRICAL WORK, INCLUDING, BUT NOT LIMITED TO: POWER FOR EQUIPMENT, SMOKE DETECTORS AND SMOKE DAMPERS, ETC. COORDINATE WITH ELECTRICAL CONTRACTOR AND THE PROTECTION/DETECTION CONTRACTOR.



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